

VIDYAPROVA ACADEMY

CLASS 8 — GENERAL SCIENCE & MATHEMATICS COURSE

Teacher: Sukesh Sir | CBSE / ICSE Foundation-Oriented Programme

Course Objective

A structured Class 8 programme designed to build strong conceptual foundations in Science and Mathematics through concept teaching, worked examples, problem solving, competency-based questions, regular practice and revision. The course is designed to prepare students confidently for Classes 9–10 and future foundation programmes.

Mathematics — Core Course

Module	Major Topics
1. Number System	Rational numbers, operations, properties and applications
2. Algebra	Linear equations, algebraic expressions, identities and factorisation
3. Geometry	Quadrilaterals, properties, angles and geometric reasoning
4. Arithmetic	Comparing quantities, percentages, profit/loss, ratio and proportion
5. Squares & Cubes	Square/square root, cube/cube root, patterns and applications
6. Exponents	Laws of exponents and powers; scientific-style numerical reasoning
7. Mensuration	Perimeter, area, volume and practical measurement problems
8. Proportion	Direct and inverse proportion with real-life applications
9. Data & Graphs	Data handling, interpretation and introduction to graphs

General Science — Core Course

Unit	Major Topics
1. Living World	Cells, microorganisms, plant and animal life, health and life processes
2. Reproduction & Adolescence	Reproduction in animals and changes during adolescence
3. Force & Pressure	Force, pressure, effects of force and everyday applications
4. Friction & Motion	Friction, advantages/disadvantages and methods of controlling friction
5. Sound	Production, propagation, characteristics and applications of sound
6. Light	Reflection, mirrors, lenses and everyday optical phenomena
7. Electricity	Chemical effects of electric current and simple applications
8. Natural Phenomena	Lightning, earthquakes and safety awareness
9. Materials & Chemistry	Combustion, flame, coal, petroleum and chemical changes
10. Environment	Conservation of plants and animals and sustainable use of resources

Teaching & Assessment Plan

A practical weekly structure for consistent academic improvement

Component	Approach
Concept Class	Clear explanation from fundamentals to application
Board Practice	NCERT-aligned examples and school-level exercises
Advanced Practice	HOTS, competency-based and application-oriented questions
Problem Solving	Step-by-step methods with mental-math and logical reasoning
Doubt Support	Dedicated doubt-solving and error correction
Weekly Test	Short topic test with performance review
Monthly Assessment	Mixed Science + Mathematics examination
Revision	Formula/concept recap, worksheets and cumulative revision

Student Outcomes

By the end of the course, students should be able to:

- Explain key Science concepts rather than memorising definitions.
- Solve Class 8 Mathematics problems systematically and accurately.
- Apply concepts to unfamiliar and real-life situations.
- Interpret diagrams, data, graphs and experimental situations.
- Attempt competency-based and HOTS questions with greater confidence.
- Develop a strong foundation for Class 9–10 and future JEE/NEET foundation learning.

Suggested Course Structure

Phase	Duration	Focus
Foundation	Weeks 1–6	Core concepts + basic problem solving
Concept Builder	Weeks 7–14	Higher-level examples + applications
Practice	Weeks 15–22	Worksheets + competency/HOTS questions
Revision	Weeks 23–26	Cumulative revision + tests
Final Preparation	Weeks 27–30	Mock tests + error analysis + exam strategy

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Science & Mathematics | Class VII–X Foundation Programme

Concept • Practice • Application • Result

Note: The course outline is designed around the current Class 8 academic direction and can be adapted to the student's school/board sequence.